

## **REMARKS**

### **I. Introduction**

Claims 9-16 are currently pending. Claim 12 has been amended. Claim 12 is objected to and claims 9-16 are rejected.

### **II. Objections to Specification and Claim 12**

In response to the Examiner's objection to the specification, Applicant has amended the paragraph beginning on page 5, line 1 of the Substitute Specification to eliminate the informality noted by the Examiner.

Claim 12 has also been amended to eliminate the alleged ambiguity noted by the Examiner.

### **III. Rejection of claims 9, 10, 13, and 15 under 35 U.S.C. 102(e)**

Claims 9, 10, 13, 15, and 16 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,724,815 B1 ("Jepsen"). Applicant respectfully submits that the rejections should be withdrawn, for at least the following reasons.

To anticipate a claim under §102(e), each and every element as set forth in the claim must be found in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To the extent that the Examiner may be relying on the doctrine of inherent disclosure for the anticipation rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Claim 9 recites, in relevant parts, a data transmission method including: “transmitting a data signal between a transmitter and a receiver as a data stream of data bursts in at least a first transmission mode and a second transmission mode; in the first transmission mode, transmitting a reference signal by the transmitter in each data burst, the reference signal being evaluated in the receiver; and in the second transmission mode, avoiding transmitting the reference signal by the transmitter in each data burst and instead transmitting additional redundancy data of the data signal in each data burst.” While the Examiner contends that Jepsen discloses the data transmission method of claim 9, Applicant respectfully submits that the actual disclosure of Jepsen does not anticipate the claimed features of independent claim 9, as explained in detail below.

Jepsen relates to GSM cellular networks, and Jepsen discloses a method and an apparatus for increasing the data rate by reduction of training data. The method of Jepsen determines the training data requirement of each individual remote unit (see Fig. 1, 103 and 107), and thereby determines the restrictions imposed on the choice of training data structure by the units. Then, the training data structure for each individual radio channel is set up, preferably employing the minimum amount of training data required for maintaining an adequate transmission quality. This allows an increased user data rate for each radio channel, since the capacity previously used up by training data now can be used by user data, thus increasing the data capacity of the communication system.

The Examiner contends that the last feature of claim 9, i.e., “avoiding transmitting the reference signal by the transmitter in each data burst and instead transmitting additional redundancy data of the data signal in each data burst,” is disclosed by Jepsen at column 8, lines 10-13, and Fig. 4 (“... the enhanced units being characterized by being able to transmit data instead of midamble and being able to receive GSM signals with midamble replaced by the user data.”). However, Jepsen clearly seeks to provide an increased data rate (e.g., col. 1, lines 64-67; col. 3, lines 50-51), and Jepsen achieves this by replacing the midamble by user data. In contrast, in the present invention the reference signal is replaced by additional redundancy data. This approach is totally different from the user data inserted by Jepsen, in particular because of the following:

- i. The additional redundancy data inserted by the present invention provides further room for error correction.
- ii. No user data is inserted by the present invention, only redundancy data is used to replace the reference signal.
- iii. The redundancy data inserted by the present invention refers to data of the data signal and not to a portion of inserted user data, because there is no such user data (see ii).
- iv. The approach mentioned in Jepsen only mentions insertion of user data. Even if a portion of redundancy data were to be inserted, user data would still have to be inserted in order to fulfill the object of Jepsen, i.e., to increase the data rate. This approach is different from the current invention, in particular, because the insertion of user data would mean there would be less room available for redundancy data that could be used for, e.g., fault error correction purposes.

Therefore, Jepsen clearly fails to teach “avoiding transmitting the reference signal by the transmitter in each data burst and instead transmitting additional redundancy data of the data signal in each data burst,” as recited in claim 9. For at least the foregoing reasons, independent claim 9, as well as its dependent claims 10, 13, 15, and 16, are not anticipated by Jepsen.

#### **IV. Rejection of claims 11, 12, and 14 under 35 U.S.C. 103(a)**

Claims 11 and 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jepsen in view of U.S. Patent No. 5,113,413 (“Brown”). Claim 14 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jepsen in view of U.S. Patent No. 6,760,589 (“Hobbis”). Applicant respectfully submits that these rejections should be withdrawn, for at least the following reasons.

Claims 11, 12, and 14 ultimately depend from, and incorporate the features of, independent claim 9. The Brown and Hobbis references fail to cure the deficiencies of the primary Jepsen reference as applied against parent claim 9, since neither Brown nor Hobbis teaches or suggests “avoiding transmitting the reference signal by the transmitter in each data burst and instead transmitting additional redundancy data of the data signal in each data burst.”

For at least this reason, it is submitted that the combination of Jepsen with Brown and Hobbis fails to render obvious dependent claims 11, 12, and 14.


In view of the above, withdrawal of the obviousness rejections of claims 11, 12, and 14 is therefore respectfully requested.

**V. Conclusion**

It is therefore respectfully submitted that all of the presently pending claims 9-16 are in allowable condition. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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